

- [20] FIG. 10 shows one implementation of a stored procedure to assign partitions to program threads.
- [21] FIG. 11 shows another table providing aggregated data and in which a business milestone timestamp is used as an aggregation criterion.
- [22] FIG. 12 illustrates a table facilitating, according to one embodiment of the invention, deletion of stale aggregated data.
- [23] FIG. 13 is a flow chart showing logic for a trigger to maintain a real-time data aggregation table according to at least one embodiment of the invention.
- [24] FIG. 14 is a flow chart showing logic for maintaining and providing aggregation values based on multiple database records according to at least one embodiment of the invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

- [25] The present invention can be advantageously used in combination with the methods, apparatus and systems described in U.S. Patent Application Pub. No. 2003/0225769 (Ser. No. 10/157,968), <sup>is now pending</sup> titled "Support for Real-Time Queries Concerning Current State, Data and History of a Process" and filed on May 31, 2002, the contents of which are incorporated by reference herein.

[26] The present invention will be described by reference to Structured Query Language (SQL) instructions and other data analysis features found in the SQL SERVER™ 2000 relational database management system (RDBMS) software and associated Online Analytical Processing (OLAP) services software available from Microsoft Corporation of Redmond, Washington. Although some aspects of SQL instructions that may be used to implement certain embodiments of the invention are described herein, other instructions, programming algorithms and procedures used to implement the invention will be apparent to persons skilled in the art once those persons are provided with the description provided herein. General descriptions of SQL SERVER™ 2000 RDBMS software and associated OLAP services software can be obtained from various sources, including Inside Microsoft® SQL SERVER™ 2000 by Kalen Delaney (2001 Microsoft Press) and Microsoft® SQL SERVER™ 2000 Books Online, available at <<http://www.microsoft.com/sql/techinfo/productdoc/2000/>>. The invention is not limited to implementation using SQL SERVER™ 2000 RDBMS software and associated OLAP services software, and may be implemented using other types of RDBMS and OLAP software.

[27] The present invention will also be described by reference to RDBMS software (such as the aforementioned SQL SERVER™ 2000 software) operating on a server and accessed by one or more clients. Such configurations are known in the art and described in, e.g., the previously-incorporated U.S. patent application 10/157,968, *is now pending*  
However, a client-server configuration is only one example of a manner in which the *KS*